IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with <u>underlining</u> and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 23, 27, 31, 39, 43, and 44 in accordance with the following:

1.   (PREVIOUSLY PRESENTED) An apparatus for generating an optical recording pulse having a first pulse, a multi-pulse chain, and a last pulse to form a domain in an optical medium, comprising:

a recording pulse generator generating said optical recording pulse; and

a controller controlling said recording pulse generator so that according to a type of said optical medium or a recording speed of said optical medium, said multi-pulse chain has a plurality of pulses, with at least two different width sets, with at least one width set comprising more than one equal width pulse, used to create a mark.

2.   (ORIGINAL) The apparatus of claim 1, wherein said controller determines whether said plurality of pulses having said two different widths should exist in said multi-pulse chain of said optical recording pulse.

3.   (ORIGINAL) The apparatus of claim 1, wherein said controller determines each width of respective pulses of said multi-pulse chain when a constant angular velocity recording method has been used in said optical medium.

4.   (ORIGINAL) The apparatus of claim 1, wherein said controller determines each width of the pulses of said multi-pulse chain during initialization of said optical medium.

5.   (ORIGINAL) The apparatus of claim 1, further comprising a non return to zero inverted (NRZI) data detector detecting the type of NRZI data and controlling said recording pulse generator to generate said optical recording pulse in response to said NRZI data.

6.   (ORIGINAL) The apparatus of claim 1, wherein said controller sets said widths of said plurality of pulses of said multi-pulse chain to a fixed value and a variable value less than the fixed value depending on said type of said optical medium or said recording speed of said optical medium.

7.   (ORIGINAL) The apparatus of claim 1, wherein said controller sets the widths of the said pulses of said multi-pulse chain to a fixed value and a variable value different from said fixed value.

8.   (PREVIOUSLY PRESENTED) A method of generating an optical recording pulse having a first pulse, a multi-pulse chain, and a last pulse, comprising:
       setting a recording mode for forming a domain on an optical medium;
       depending on a type of said optical medium or a recording speed of said optical medium, generating said multi pulse chain with a plurality of pulses having at least two different width sets, with at least one width set comprising more than one equal width pulse; and
       generating said optical recording pulse having said first pulse, said multi-pulse chain, and said last pulse.

9.   (PREVIOUSLY PRESENTED) The method of claim 8, further comprising determining whether two different width sets of said pulses of said multi-pulse chain or more than two width sets of said pulses of said multi-pulse chain should exist .

10.   (ORIGINAL) The method of claim 8, wherein the width of each pulse of said multi-pulse chain is based upon a constant angular velocity (CAV) recording method used for said optical medium.

11.   (ORIGINAL) The method of claim 8, wherein said multi-pulse chain is generated during initialization of said recording mode.

12.   (PREVIOUSLY PRESENTED) A method of recording in an optical recoding apparatus, comprising:
       generating an optical recording pulse having a first pulse, a multi-pulse chain, and a last pulse, said multi pulse chain having a plurality of pulses with a plurality of width sets, with at least one width set comprising more than one equal width pulse; and

forming a domain on an optical medium in accordance with said optical recoding pulse.

13.   (PREVIOUSLY PRESENTED) The method of claim 12, wherein:

said first pulse has a first width;

said last pulse has a last width; and

said multi-pulse chain comprising a plurality of width sets includes a set of second pulses having a second width and a third pulse having a third width, said second and third widths being narrower than the widths of said first pulse and said last pulse.

14.   (PREVIOUSLY PRESENTED) The method of claim 12, wherein:

said first pulse has a first width; and

said multi-pulse chain comprising a plurality of width sets includes a set of second pulses each having a second width and another set of third pulses each having a third width different from said second width.

15.   (PREVIOUSLY PRESENTED) The method of claim 12, wherein said multi-pulse chain comprises three width sets of pulses each set having a second width, a third width, and a fourth width, respectively, which are different from each other.

16.   (ORIGINAL) The method of claim 15, wherein said second, third, and fourth widths are narrower than that of said first pulse and said last pulse.

17.   (ORIGINAL) The method of claim 12, wherein one of said pulses of said multi-pulse chain has a width greater than that of one of said first pulse and said last pulse.

18.   (ORIGINAL) The method of claim 12, wherein one of said pulses of said multi-pulse chain has a width narrower than that of one of said first pulse and said last pulse while a second one of said pulses is wider than one of said first pulse and said second pulse.

19.   (PREVIOUSLY PRESENTED) The method of claim 12, wherein said multi-pulse chain comprises first and second width sets of said pulses, said first width set of pulses having a first width greater than that of said second width set of said pulses, said first width set of said pulses following said first pulse while said second width set of said pulses are followed by said last pulse.

20.   (PREVIOUSLY PRESENTED) The method of claim 12, further comprising:

receiving information representing a first length of a first domain and a second length of a second domain, said first length being greater than said second length;

generating said multi-pulse chain when said information represents said first length; and

generating a second multi-pulse chain when said information represents said second length.

21.   (PREVIOUSLY PRESENTED) The method of claim 12, further comprising:

receiving information representing one of a first type of said optical medium and a second type of said optical medium;

generating said multi-pulse chain when said information represents said first type; and

generating a second multi-pulse chain when said information represents said second type.

22.   (PREVIOUSLY PRESENTED) The method of claim 12, further comprising:

receiving information representing a constant angular velocity (CAV) recording process;

generating said multi-pulse chain when said information represents said CAV recording process; and

generating a second multi-pulse chain when said information does not represent said CAV recording process.

23.   (CURRENTLY AMENDED) A method for recording in an optical recording apparatus, comprising:

generating an optical recording pulse having a first pulse having a first width, a multi-pulse chain having a plurality of pulses, and a last pulse having a last width;

forming a domain on an optical medium in accordance with said optical recording pulse;

receiving information corresponding to a length of a domain; and

changing at least one of said pulses of said multi-pulse chain to have sets of pulses with at least two different width sets, with one width set comprising more than one equal width-set pulse in response to said length of said domain.

24.   (PREVIOUSLY PRESENTED) The method of claim 23, wherein said one width set is greater than that of one of said first pulse and said last pulse.

25.   (PREVIOUSLY PRESENTED) The method of claim 23, wherein said one width set is less than that of said one of said multi-pulse chain, said first pulse, and said last pulse.

26.   (CANCELLED)

27.   (CURRENTLY AMENDED) A method for recording in an optical recording apparatus, comprising:

determining a length of a domain on an optical medium; and

preparing a recording pulse including first pulse width set having a first width, a multi-pulse chain having a second pulse width set having a second width and a third pulse width set having a third width, and a last pulse having a last width in order, said second width of said second pulse width set being different from said third width of said third pulse width set, said recording pulse corresponding to the length of a domain which is formed on the optical medium, wherein at least one of said second pulse width set and said third pulse width set comprises more than one equal pulse width pulse.

28.   (ORIGINAL) The method of claim 27, further comprising generating said recording pulse in response to said length of said domain greater than a minimum length.

29.   (PREVIOUSLY PRESENTED) The method of claim 27, further comprising generating a second recording pulse including said first pulse, a second multi-pulse chain having a fourth pulse width set with a fourth width different from one of said second width of said second pulse width set and said third width of said third pulse width set, and said last pulse in order in response to said length of said domain less than a reference.

30.   (PREVIOUSLY PRESENTED) The method of claim 27, further comprising preparing a second recording pulse including said first pulse, a second multi-pulse chain having a fourth pulse width set with a fourth width less than said second and third widths, and said last pulse in order, said second recording pulse width set corresponding to a second length of a second domain which is formed on said optical medium, wherein said second length of said second domain is less than said length of said domain.

31.   (CURRENTLY AMENDED) A method for forming a domain on an optical medium, comprising:

preparing a first recording pulse including a first pulse having a first width, a multi-pulse chain having at least two pulses with a second width in a second pulse width set and a third width in a third pulse width set different from said second width, and a last pulse having a last width in order, wherein at least one of said second pulse width set and said third pulse width set comprises more than one equal-pulse width pulse;

preparing a second recording pulse including a second multi-pulse chain having a fourth pulse width set with a fourth width different from one of said second and third widths, and a second last pulse in order;

generating said first recording pulse in response to a length of said domain greater than a reference; and

generating said second recording pulse in response to said length of said domain less than said reference.

32.   (ORIGINAL) The method of claim 31, wherein said domain represents a non-return to zero inverted data to be recorded on said optical medium.

33.   (PREVIOUSLY PRESENTED) A method for forming a domain on an optical medium, comprising:

preparing a first recording pulse including first pulse having a first width, a multi-pulse chain having at least two pulses of a second pulse width set where each second pulse has a second width, a third pulse width set having a third width, and a fourth pulse width set having a fourth width, and a last pulse having a last width in order, said second width of said second pulse width set different from said third and fourth widths; and

generating said recording pulse when a constant angular velocity recording process is used for said optical medium.

34.   (PREVIOUSLY PRESENTED) The method of claim 33, further comprising:

preparing a second recording pulse including a second first pulse, a second multi-pulse chain having a fifth pulse width set having a fifth width and a sixth pulse width set with a sixth width, and a second last pulse in order; and

generating said second recording pulse when said constant angular velocity recording process is not used for said optical medium.

35.   (PREVIOUSLY PRESENTED) A method for forming a domain on an optical medium, comprising the operations of:

preparing a first recording pulse including first pulse width set having a first width, a multi-pulse chain having at least two pulses of a second pulse width set where each second pulse has a second width, a third pulse width set having a third width, and a fourth pulse width set having a fourth width, and a last pulse having a last width in order, said second, third, and fourth widths being different from each other; and

generating said recording pulse in response to either one of a length of said domain and a recording speed of said domain for forming said domain representing data to be recorded on said optical medium.

36.   (ORIGINAL) The method of claim 35, wherein said recording speed represents a constant angular velocity recording process.

37.   (PREVIOUSLY PRESENTED) The method of claim 35, wherein said length of said domain is greater than a minimum length formed on said optical medium.

38.   (ORIGINAL) The method of claim 35, wherein said length of said domain represents non-return to zero inverted data.

39.   (CURRENTLY AMENDED) A method for forming a domain on an optical medium, comprising:

preparing a first recording pulse including first pulse width set having a first width, a multi-pulse chain having a second pulse width set having a second width and a third pulse width set having a third width, and a last pulse having a last width in order, said second width of said second pulse width set different from said third width of said third pulse width set, wherein at least one of said second pulse width set and said third pulse width set comprises more than one equal pulse width pulse; and

generating said recording pulse in response to either one of a length of said domain and a recording speed of said domain for forming said domain representing data to be recorded on said optical medium.

40. (PREVIOUSLY PRESENTED) The method of claim 39, further comprising the operations of:

providing a fourth pulse width set having a fourth width;

generating a second recording pulse having said fourth pulse width set inserted into said multi-pulse chain when said domain is formed on an outside area of said optical medium while said recording pulse not having said fourth pulse width set is generated when said domain is formed on an inside area of said optical area, wherein said outside area is greater than said inside area in diameter.

41.   (ORIGINAL) The method of claim 39, wherein said first pulse, said multi-pulse chain, and said last pulse have the same height.

42.   (PREVIOUSLY PRESENTED) An apparatus for generating an optical recording pulse for forming a domain on an optical medium, comprising:

a recording pulse generator generating said optical recording pulse having a first pulse, a multi-pulse chain having a second pulse width set with a second width, and a last pulse in response to non-return to zero inverted data; and

a controller controlling said recording pulse generator to generate a third pulse width set with a third width different from said second width of said second pulse width set of said multi-pulse chain, said third pulse width set inserted into said multi-pulse chain of said optical recording, pulse, wherein at least one of said second pulse width set and said third pulse width set comprises more than one equal pulse width.

43.   (CURRENTLY AMENDED) The apparatus of claim 42, wherein said controller controls said recording pulse generator to insert said third pulse width set between said second pulse width set and said last pulse.

44.   (CURRENTLY AMENDED) The apparatus of claim 42, wherein said controller controls said recording pulse generator to insert said third pulse width set between said first pulse and said second pulse width set.

45.   (PREVIOUSLY PRESENTED) The apparatus of claim 42, said controller receiving from said optical medium information relating to one of a recording type of said optical

medium and a recording speed of said optical medium, and said controller controlling said recording pulse generator to generate said multi-pulse chain in response to said information.

46.   (PREVIOUSLY PRESENTED) The apparatus of claim 42, wherein said controller controls said recording pulse generator to generate said multi-pulse chain when a constant angular velocity recording method is used for said optical medium.

47.   (PREVIOUSLY PRESENTED) The apparatus of claim 42, wherein said controller controls said recording pulse generator to generate said multi-pulse chain when a length of said domain is greater than a reference.

48.   (PREVIOUSLY PRESENTED) The apparatus of claim 42, wherein said controller controlling said recording pulse generator to generate said multi-pulse chain when said domain is formed on an outside area of said optical medium while said multi-pulse chain is not generated when said domain is formed on an inside area of said optical medium.